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Summary

The dollar has lost 50 percent of its value against the yen over the past 36 months. Yet Japanese exporters have only marked up their U.S. prices by roughly half this amount. To many American competitors this is another example of corporate Japan flaunting international trade rules. But the failure of Japanese manufacturers to increase export prices in line with the dollar's decline is not prima facie evidence of dumping -- selling products here for less than at home -- since this is the wrong comparison. The correct test is the relationship between manufacturers' export prices and their prices in Japan. Exporters in a range of industries argue that products for sale in the United States were priced above those in the domestic market when the dollar started to depreciate in February 1985 because they had not trimmed export prices while the American currency was rising in value during the first half of the 1980s. At the same time, however, the fact that Japan's manufacturing sector has been able to offset a big part of the dollar-yen realignment through extensive cost-cutting and enormous savings on imported inputs is not incontrovertible proof that Japanese-made products are being sold in this country at fair value.

The Dollar's Drop: Theory and Reality

If the strong dollar was responsible for much of the runaway growth of the U.S. trade deficit during the first half of the 1980s, then a weaker dollar should narrow the yawning gap between imports and exports. That in oversimplified terms was the reasoning when the United States, Japan, West Germany,

England and France agreed in September 1985 to launch a coordinated campaign to drive down the value of the American currency. Theory and reality, however, have not yet meshed. Since peaking in February 1985, the dollar has declined by roughly 50 percent against the currencies of the world's 10 other major industrial nations and is now within striking range of its July 1980 low. But the U.S. trade deficit, which widened by nearly \$100 billion between 1981 and 1985 to \$133.7 billion, has continued to expand, hitting \$156.2 billion in 1986 and \$171.2 billion last year.

True, U.S. exports are moving in the right direction. Foreign sales finally topped their 1981 all-time high in 1987, increasing 11.5 percent to \$252.9 billion. More important, the volume of exports, which had rebounded 3.3 percent in 1986, jumped 12.8 percent. The major problem is on the other side of the trade ledger. The U.S. import bill is still climbing -- and not just because the weaker dollar inflates import prices; the volume of products bought from abroad has also continued to rise. In fact, 1987's import gain of 10.7 percent to \$424.1 billion was more the result of bigger volume (up 7.3 percent) than higher prices, while the 8.7 percent expansion in 1986 purchases was entirely due to a 10.5 percent volume increase.

Why are the import numbers behaving so perversely? The reasons are starting to have a familiar ring. Although the dollar has dropped against the yen and the currencies of West Germany, England, France and Italy over the last 36 months, it has held its ground or even appreciated against the currencies of the other five countries that make up the list of the top ten U.S. import suppliers. Until the start of 1987 the dollar was up slightly against the dollar of Canada, the number-two import source behind Japan, and it had also strengthened against the Taiwanese dollar and the Korean won. With Mexico's peso losing value almost daily and the Hong Kong dollar moving in synch with this country's currency, more than one-third of U.S. imports has largely escaped the effects of the dollar's decline. Add in purchases from most other developing countries and nonmarket economies plus oil imports and the figure quickly rises to over one-half.

What's more, conventional economic theory was a misleading guide to how manufacturers in Japan and Europe would react to the shift in the dollar's value. According to the textbooks, exporters should have tried to maintain profit margins by boosting the dollar prices of their U.S.-bound exports in step with the depreciation of the American currency. That was what most of their counterparts in the United States did during the strong dollar period of 1981 to early 1985. It was also the strategy Japanese businesses followed in 1978 when the dollar dropped 20 percent-plus against the yen and exporters passed through roughly two-thirds of this change in the form of higher prices. This time around, however, major suppliers in both Japan and Europe have opted for a different game plan: to protect their stake in the key U.S. market by hiking export prices as little as possible.

Just how little or much of the dollar's decline have foreign suppliers passed through by raising export prices? Looking at the period from the dollar's peak to September 1987, the Department of Labor's Bureau of Labor Statistics calculated the average pass-through (excluding fuel imports) at 46.5

percent. Put the other way, overseas manufacturers absorbed about one-half of the dollar's realignment. But like most averages, BLS's pass-through figure masked considerable variation among major import product groups. At the upper end were professional, scientific and controlling instruments, where 76.7 percent of the dollar's drop showed up in higher U.S. import prices, metalworking machinery (75.6 percent) and general industrial machinery (71.2 percent). Automotive products and parts were somewhat above the average with a pass-through ratio of 55.3; so was specialized industrial machinery (59 percent). Far behind were electric machinery (38.8 percent), computer equipment and other office machines (37.1 percent), steel (17.2 percent) and telecommunications equipment, including consumer electronics products (11.4 percent).

These differences are graphic evidence that market share considerations have dictated the U.S. pricing strategies of major foreign competitors. Japanese and European exporters have passed through only a fraction of the dollar's fall against their currencies in industries where there is stiff competition from third-country suppliers, particularly in the newly industrialized countries of Asia and Latin America. Consumer electronics is a prime example. U.S. import price hikes have been limited as well in product groups like computers because of the strength of American rivals and their decision to hold the line on price increases. Conversely, automotive makers and other domestic manufacturers that have raised prices to boost profit margins have given Japanese and European exporters maneuvering room regardless of U.S. market conditions. But above-average pass-through ratios are also characteristic of industries where foreign suppliers are the main players -- machine tools, for example.

The one question the BLS study does not tackle directly is how suppliers in individual countries, particularly Japan, have changed their U.S. prices in the wake of the dollar's depreciation. The issue of Japanese export pricing has increasingly preoccupied Reagan administration trade policymakers and American corporate executives. The dollar has dropped 50 percent against the yen since February 1985, yet the bilateral trade deficit is just now showing signs of reversing course, having expanded from \$18.1 billion in 1981 to \$49.8 billion in 1985 and on to \$59.8 billion last year. The U.S. trade account with West Germany has also continued to deteriorate despite a dollar-mark realignment that matches the shift in the dollar-yen exchange rate, while larger deficits in 1987 trade were posted as well with Mexico, Taiwan, Korea and several other major import suppliers. Japanese exporters have been singled out, though, because they generally represent the cutting edge of foreign competition.

The prices of Japanese-made products shipped to the United States have gone up despite industry's attempt to maintain market share. That is intuitively obvious from the BLS data. But there is more direct evidence. On average Japanese manufacturers passed through 58.1 percent of the dollar's decline in the form of higher prices for their worldwide exports during the September 1985-November 1987 period (see Table 1). This statistic, which is the result of a different and admittedly less sophisticated methodology than BLS's, does double duty as a proxy for the pricing response of Japanese companies selling to the United States, the destination for nearly two-fifths of Japan's exports. If anything, it understates the extent of the pass-through on U.S.-bound exports since the prices of products coming here have been boosted by bigger margins than those shipped elsewhere.

Table 1: Extent of Dollar's Depreciation Passed Through in Japanese Export Prices,
September 1985-November 1987

<u>Product Line</u>	<u>Pass Through</u>	<u>Product Line</u>	<u>Pass Through</u>
Transportation Equipment	60.9%	Precision Instruments	57.1%
Motor Vehicles	62.3	Scientific and Optical Equipment	67.8
Cars	63.9	Cameras	84.4
Trucks and Buses	54.5	Copiers	68.0
Automotive Parts	62.9	Watches and Clocks	43.0
Motorcycles	69.2	Audio and Video Recorders	32.7
Ships and Boats	6.8	Video Cassette Recorders	10.2
Electric Machinery	71.2	Steel	31.8
Electric Power Apparatus	100.2	Bars, Rods, Shapes and Sections	45.7
Insulated Wire and Cable	90.6	Plates and Sheets	26.1
Television Sets	57.6	Hoops, Strip and Coils	38.4
Color Television Sets	64.5	Pipes, Tubes and Fittings	31.0
Radio Receivers	88.3	Nonferrous Metals	40.5
Other Telecommunications Equipment	49.5	Copper and Copper Alloys	41.4
Microphones, Loudspeakers		Fabricated Metal Products	64.0
and Amplifiers	49.0	Structural Parts and Structures	44.6
Appliances	51.5	Hand and Machine Tools	80.1
Electronic Tubes and Semiconductors	53.3	Organic Chemicals	45.1
Integrated Circuits	73.2	Inorganic Chemicals	30.3
Nonelectric Machinery	61.8	Plastics and Resins	41.6
Internal Combustion Engines	62.6	Tires	24.5
Agricultural Machinery	41.9	Paper and Paper Products	46.0
Calculators	75.9	Tableware	62.8
Computers and Peripheral Equipment	43.5	Textile Fibers	41.1
Metalworking Machinery	73.4	Yarn	45.5
Textile Machinery	74.1	Synthetic Yarn	41.2
Construction and Mining Machinery	30.7	Fabrics	50.8
Heating and Cooling Equipment	142.5	Cotton Fabrics	61.9
Pumps and Centrifuges	34.4	Synthetic Fabrics	47.5
Mechanical Handling Equipment	94.2	Apparel	64.1
Bearings	48.9	Fish and Fish Products	42.6
		Total Exports	58.1

Note: The dollar depreciated 42.3 percent against the yen between September 1985 and November 1987 based on the rates the Ministry of Finance used to convert the export figures from yen to dollars.

Source: Calculated from Japan Tariff Association, The Summary Report: Trade of Japan.

In some respects the numbers in Table 1 raise as many questions as they answer, starting with the obvious: how can Japanese exporters absorb roughly 40 percent of the dollar's decline against the yen over an extended period of time? The standard reply is by cutting production costs. Americans generally dismiss this explanation as self-serving since it flies in the face of the conventional wisdom that Japanese manufacturers are among the world's most efficient producers, but they are reacting too hastily. The fact of the matter is that with Japanese imports priced in dollars, the 50 percent decline in the American currency has sliced the yen costs of the huge volume of industrial inputs manufacturers buy from abroad. It has also triggered an unparalleled campaign in one export-oriented company after another to find additional ways to lower the break-even point.

Coping with the Dollar's Decline

A study of Japanese export pricing completed recently by the Ministry of International Trade and Industry contained an eye-catching statistic: the drop in the dollar plus the decline in international oil prices between the third quarter of 1985 and the same period of 1987 cut the costs of materials used by Japan's manufacturing sector by 14.7 percent and overall production costs by 10 percent. Although the ministry's supporting documentation has not been released, the big fall in Japanese import prices (see Table 2) gives some idea of how manufacturers have effortlessly lowered materials costs, which represent an estimated 55 to 60 percent of total production costs on an industry-wide basis.

Table 2: Changes in Japan's Yen-Based Import Prices, 1985-87

	<u>1985</u>	<u>1986</u>	<u>1987</u>
Total	-2.4%	-44.2%	-8.3%
Food and Feed	-9.8	-24.5	-15.2
Textiles	-6.6	-18.4	0.4
Metals	-4.8	-23.3	-2.5
Wood, Lumber and Related Products	-6.8	-21.9	14.3
Petroleum, Coal and Natural Gas	0.4	-49.6	-12.5
Chemicals	-5.2	-27.8	-10.5
Machinery and Equipment	-2.3	-21.9	-8.5
Miscellaneous	-6.6	-19.6	-1.4
Reference			
Raw Materials and Fuels	-1.3	-45.2	-8.8
Light Industrial Products	-1.3	-11.2	0.8
Heavy Industrial Products and Chemicals	-3.7	-21.7	-6.4

Source: Bank of Japan

Not surprisingly, a substantial part of the savings on input costs has come from oil. The landed price of a barrel of oil was \$27.37 in September 1985; in November of last year it was \$18.40 -- a 32.8 percent reduction. In

yen terms, though, the difference was a whopping 61.1 percent. With deliveries averaging 249.9 million barrels a month during this period, the cumulative savings in Japan's import bill added up to nearly ¥10.7 trillion (\$85.4 billion at ¥125=\$1.00). Electric utilities, which depend on oil for two-fifths of their power generation, did not pass on all of this bonanza, but electricity rates for industrial users have been cut three times (June 1986, January 1987 and this past January) for a total reduction of 22.1 percent. Steel makers, petrochemical producers and other manufacturers that use naphtha and heavy fuel oil in the production process or as a fuel apparently got a bigger price break from Japanese oil refiners.

World prices for the long list of other industrial inputs that Japan imports in volume -- iron ore, aluminum, copper, pulp, logs, cotton, wool, rubber, coal and liquefied gas -- have generally gone up over the last three years or so, denying manufacturers the double bonus obtained from oil imports. Yet the decline of the dollar alone has lowered the value of purchases from abroad by several trillion yen, a major source of savings given the fact that imports supply about 70 percent of the raw materials other than fuels used by Japanese manufacturers and probably a similar proportion of the much larger consumption of semi-finished goods.

While the weaker dollar has cut the costs of imported inputs, it has not been much of a factor in reducing the expense of parts and other intermediate products, undoubtedly the biggest materials costs incurred by the vast group of export-oriented companies in the machinery and transportation equipment industries. True, a steadily increasing number of manufacturers are sourcing components and subassemblies from offshore, both from their own plants and from foreign suppliers, but the impact on costs is still marginal. Through their own initiatives, however, automotive, electronics and nonelectric machinery makers have achieved substantial savings on intermediates, primarily, anecdotal information suggests, by working with their extensive network of parts subcontractors to find ways to lower the prices charged.

Japanese industry's cost-cutting campaign has been targeted equally at personnel expenses, which account for another 15 percent or so of total production costs. Unit labor costs, already falling on a sector-wide basis, have been trimmed farther. Labor productivity, which increased by 19 percent in the first half of the 1980s, went up an additional 12 percent in the 1985-87 period (see Table 3), facilitated mainly by continuing changes in production processes, including more automation, but also by redesigning products to require less labor input. At the same time, management has taken an increasingly hard line on wage hikes, keeping raises below productivity gains, particularly in 1987.

Corporate planners have also found ways to decrease the expenses that make up the other 25 to 30 percent of aggregate production costs. To cite just one example, manufacturers have reduced inventories of inputs and intermediate products and stocks of finished goods. Moreover, the same stringent controls applied to production costs have been extended to selling expenses, including salaries and commissions, and to general and administrative costs, which cover such expenses as office salaries, office supplies, and heat and light.

Table 3: Changes in Wages and Labor Productivity in Japan's Manufacturing Sector, 1985-87

	<u>Wages</u>			<u>Labor Productivity</u>		
	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1985</u>	<u>1986</u>	<u>1987*</u>
Total	4.0%	2.4%	2.5%	4.2%	2.2%	5.5%
Foods and Tobacco	3.8	7.3	3.3	-0.9	1.8	-2.1
Textiles	3.5	2.0	3.4	1.9	0.9	2.5
Apparel	0.4	1.8	3.3	1.6	-0.1	-1.5
Lumber and Wood Products	5.5	5.4	4.3	5.1	13.2	-6.4
Pulp and Paper Products	5.6	2.6	3.0	6.3	5.6	7.9
Chemicals	3.6	3.4	4.2	3.2	0.9	9.0
Petroleum and Coal Products	6.2	3.6	3.8	-0.6	3.0	4.0
Nonmetallic Mineral Products	4.0	4.0	3.1	1.7	-0.5	5.3
Steel	5.0	0.3	-1.6	4.4	-2.4	6.8
Nonferrous Metals	4.8	2.8	2.8	0.9	0.6	6.0
Fabricated Metal Products	3.1	4.1	1.2	7.1	0.5	5.4
Nonelectric Machinery	4.1	-0.1	1.6	6.1	-5.2	2.4
Electric Machinery	1.9	1.6	4.4	10.2	4.7	10.5
Transportation Equipment	4.8	1.6	1.4	2.8	0.1	-0.7
Precision Instruments	6.3	0.9	1.3	17.1	10.1	2.9

*Ten months only.

Source: Ministry of Labor and Japan Productivity Center

However small, all of the cost-cutting steps export-oriented manufacturers have taken since the dollar began its drop against the yen are starting to add up to significant savings in operating expenses. Yet these savings offset only part of the currency realignment not passed through in the form of higher export prices. Exporters have therefore had to sacrifice short-term profits to maintain share in the U.S. market. The record or near-record profits earned during the 1984-85 export boom left companies in good shape to pursue this strategy in 1986 and the early part of 1987 (see Table 4). Since then operating income margins have improved -- thanks in large part to expanded sales at home but also because of additional export price hikes and increasing returns from the stringent cost controls implemented earlier.

Japanese Export Pricing Under Attack

The success of export-oriented companies in coping with the shift in the dollar-yen exchange rate has created new trade tensions with the United States. In one U.S. industry after another there is talk that Japanese manufacturers must be dumping -- selling products here for less than in Japan or, in some cases, below production costs -- since their U.S. prices have not gone up by the full margin of the currency realignment. Commerce Secretary C. William Verity added an official warning last November, telling Japanese companies that by failing to raise prices in line with the dollar's drop they risked being charged with dumping. Making sure the message got through, he confirmed that the department was looking into the possibility of dumping in a variety of products.

Table 4A: Income Statement for Corporations in Japan's Manufacturing Sector, FY 1980-FY 1986

(in billions of yen)

	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985	FY 1986
Sales	Y262,572	Y283,623	Y279,853	Y298,582	Y309,618	Y333,797	Y324,927
Cost of Goods Sold	214,122	231,490	227,330	242,253	249,199	269,176	314,388
Selling and General and Administrative Expenses	35,036	38,730	40,864	44,237	46,252	51,500	10,539
Operating Income	13,414	13,403	11,659	12,093	14,167	13,121	
Non-operating Income							
(Expenses)	(3,938)	(5,005)	(3,889)	(3,436)	(3,157)	(2,324)	n.a.
Current Income	9,477	8,398	7,770	8,656	11,010	10,797	n.a.
Extraordinary Profits and Losses	15	278	315	321	1	78	n.a.
Pretax Income	9,491	8,675	8,084	8,977	11,011	10,875	n.a.
Provision for Income Taxes	4,692	4,891	4,427	5,025	6,097	5,917	n.a.
Net Earnings	4,800	3,785	3,657	3,952	4,915	4,958	n.a.
Profit Margin	1.8%	1.3%	1.3%	1.3%	1.6%	1.5%	n.a.

Note: The yen figures can be converted into dollars using the following average exchange rates: FY 1980, Y217.25; FY 1981, Y227.52; FY 1982, Y249.64; FY 1983, Y236.33; FY 1984, Y244.19; FY 1985, Y221.09; and FY 1986, Y159.84.

Source: Ministry of Finance

Table 4B: Profit Margins in Japan's Manufacturing Sector*

	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985	FY 1986
Total	5.1%	4.7%	4.2%	4.1%	4.6%	3.9%	3.2%
Food Products	3.6	3.6	3.2	3.6	3.3	3.3	3.6
Textiles	3.5	3.1	2.7	2.8	3.4	3.0	2.6
Pulp and Paper Products	5.2	5.8	4.3	4.4	5.2	4.6	4.9
Chemicals	6.1	5.3	5.3	6.1	6.2	6.0	6.1
Steel	8.0	7.5	5.0	3.1	6.1	3.9	1.0
Nonferrous Metals	5.5	4.0	2.7	3.6	3.5	2.4	2.3
Fabricated Metal Products	4.8	4.2	3.3	2.6	4.8	4.4	4.0
Nonelectric Machinery	6.6	6.0	5.2	4.3	4.7	4.6	3.2
Electric Machinery	6.0	6.3	5.7	5.7	6.2	4.5	2.7
Transportation Equipment	4.2	3.5	3.3	3.3	3.7	4.0	2.8
Precision Instruments	7.7	6.6	6.9	5.9	6.3	5.6	2.5

	1985				1986				1987		
	I	II	III	IV	I	II	III	IV	I	II	III
Total	4.9%	5.3%	4.0%	4.2%	3.7%	3.8%	3.1%	4.1%	3.6%	4.4%	4.3%
Food Products	2.3	4.7	4.6	5.3	2.5	4.5	4.0	5.1	2.2	4.3	4.6
Textiles	4.1	4.2	2.9	3.3	3.5	2.3	3.7	3.8	4.5	5.4	5.4
Pulp and Paper Products	4.9	5.0	4.0	4.3	4.1	6.2	4.8	5.9	4.5	5.9	4.7
Chemicals	5.7	6.8	5.9	6.4	5.9	6.4	6.2	7.5	6.5	7.8	7.4
Steel	6.4	5.6	4.2	3.8	2.6	1.2	0.3	1.6	0.6	2.9	4.2
Nonferrous Metals	3.8	3.3	2.2	2.3	1.8	2.8	2.3	2.8	3.4	3.2	3.4
Fabricated Metal Products	6.3	6.7	4.7	4.3	4.4	5.3	4.4	4.5	5.9	4.1	4.5
Nonelectric Machinery	6.3	6.5	5.1	3.7	4.4	4.8	3.7	3.2	3.2	3.5	4.8
Electric Machinery	6.6	5.9	4.8	4.0	3.8	2.5	2.4	2.0	3.1	2.5	3.5
Transportation Equipment	3.4	5.6	3.5	3.9	2.7	2.4	1.7	2.7	2.4	2.9	3.1
Precision Instruments	6.7	7.2	5.6	5.4	5.8	4.9	3.0	2.6	3.8	3.0	4.0

*Margins reflect the ratio of operating income to sales. Operating income is derived by subtracting the cost of goods sold and selling, general and administrative expenses from sales.

Note: The fiscal year figures include all corporations in the manufacturing sector while the quarterly numbers cover corporations capitalized at ¥10 million (\$80,000 at ¥125=\$1.00) or more.

Source: Ministry of Finance

Japanese manufacturers are perplexed by all the dumping allegations. Major exporters have repeatedly said that they have covered the dollar's drop through a combination of higher export prices, lower operating costs and thinner profit margins. MITI came to the same conclusion in its export pricing study. Ministry spokesmen acknowledge that there might be individual exceptions, but say the only thing exporters as a group can be faulted for is not always adjusting prices fast enough during periods of rapid change in the dollar-yen rate.

Government and industry officials in Japan raise an interesting question in responding to the U.S. criticism: if Japanese exporters are assumed to be selling here at less than fair value, why have so few antidumping petitions been filed? Eight proceedings were initiated in 1986 and six last year -- hardly an indication of the widespread dumping alleged by American producers since eight investigations were also started in 1983 followed by four the next year and five in 1985.

The standard reasoning in Washington is that the cost of pursuing a dumping complaint and the year-plus time frame for most investigations have discouraged U.S. manufacturers from filing. This might be true in some instances, but another explanation seems closer to the mark. No matter how airtight the case, an American company or group of producers is not going to charge its affiliates and suppliers with dumping -- and that is what many major Japanese exporters are.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.